



Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2019-09-07-19 **Date:** 01-07-19

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in saharanagara, Byatarayanapura, Sanjeevininagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalasuru(P), Bangalore North-562157.

Customer's Reference : BBMP/EE/BTP/WO/70/2018-19

Date of Receipt : 28-06-19

Sample Type : Birla Super 53grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5, Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11, DETERMINATION OF DENSITY , Clause 6

Date of test : 29-06-19

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.85	—
2	Fineness by Air permeability method (m ² /kg, Min)	348.6	225m ² /kg, Min
3	Density (gm/cc)	3.15	—
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	135 minutes	Not less than 30 minutes
6	Final Setting time	245 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

M. N. D.
AE (W2)

Assistant Executive Engineer
Kodigehalli Division,
Yelahanka 7 B.B.M.P.,
Bangalore.

Page 1/1

****End of Report****



FOR CIVIL Pro.

R. KARTHIK RECHAN
Authorized Signatory
Quality Manager



TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2019-09-07-19 Date: 27-07-19

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in saharanagara, Byatarayanapura, Sanjeevininagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalasuru(P), Bangalore North-562157.

Customer's Reference : BBMP/EE/BTP/WO/70/2018-19

Date of Receipt : 28-06-19

Sample Type : Birla Super 53grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 6, Determination of Compressive Strength, Clause 6

Date of test : 29-06-19

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Compressive Strength			
Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.0N/mm ²	Not less than 27 N/mm ²
2	7 Days	39.5N/mm ²	Not less than 37 N/mm ²
3	28 Days	58.0N/mm ²	Not less than 53 N/mm ²

Abhinav N.P
AEC-21

Assistant Executive Engineer
Kodigehalli Sub Division
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Page 1/1
****End of Report****



FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

**TEST REPORT ON COARSE AGGREGATES**

Lab ID : CP-2019-09-07-19 Date: 01-07-19

Customer : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Address : Kodigehalli Sub Division, BBMP, Bangalore.

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in sahakaranagara, Byatarayanapura, Sanjeevininagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalasuru(P), Bangalore North-562157.

Customer's Reference : BBMP/EE/BTP/WO/70/2018-19

Source of Sample : Sample supplied by Agency

Sample condition : Satisfactory

Date of Receipt : 28-06-19

Sample Type : 40mm down size coarse aggregate

Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties

Date of test : 28-06-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	215	215	1.4	98.6	90-100
3	20 mm	7455	7670	51.1	48.9	30-70
4	10 mm	4266	11936	79.6	20.4	10-35
5	4.75 mm	2844	14780	98.5	1.5	0-5
6	Pan	220	15000	100.0	0	---





Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID

:

CP-2019-09-07-19

Date: 01-07-19

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.8	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.4	
3	Specific Gravity	2.65	—
4	Bulk Density(Loose) (Kg/l)	1.42	—
5	Bulk Density(Compacted) (Kg/l)	1.48	—
6	Water Absorption(%)	0.22	—

Note:

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

FOR CIVIL Pro.

R. Karthik Rechan

R KARTHIK RECHAN
Authorized Signatory
Quality Manager



Page 2/2

****End of Report****

Abhijit N D
AE (2)

Aug
Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bangalore.



TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2019-09-07-19 Date: 01-07-19

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in sahakaranagara, Byatarayanapura, Sanjeevininagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalasuru(P), Bangalore North-562157.

Customer Reference : BBMP/EE/BTP/WO/70/2018-19

Date of Receipt : 28-06-19

Sample Type/ Size : 20mm down size coarse aggregate

Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties

Date of test : 28-06-19

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	245	245	4.9	95.1	90-100
3	10 mm	2635	2880	57.6	42.4	25-55
4	4.75 mm	1780	4660	93.2	6.8	0-10
5	Pan	340	5000	100	0	-





Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID

: CP-2019-09-07-19

Date: 01-07-19

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	9.5	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.6	
3	Specific Gravity	2.67	—
4	Bulk Density(Loose) (Kg/l)	1.53	—
5	Bulk Density(Compacted) (Kg/l)	1.56	—
6	Water Absorption(%)	0.22	—
7	Aggregate crushing Value(%)	24.2	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	23.8	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

FOR CIVIL Pro.

R. Karthik Rechan
R KARTHIK RECHAN
Authorized Signature
Quality Manager

Day
Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka Zone, B.B.M.P.
Bangalore.
Page 2/2
End of Report

M. Y. N. D.
DE (22)



TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2019-09-07-19 Date: 01-07-19

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in saharanagara, Byatarayanapura, Sanjeevinagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalsuru(P), Bangalore North-562157.

Customer's Reference : BBMP/EE/BTP/WO/70/2018-19

Date of Receipt : 28-06-19

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption

Date of test : 28-06-19

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	28	28	2.8	97.2	90-100	90-100	90-100	95-100
3	2.36 mm	57	85	8.5	91.5	60-95	75-100	85-100	95-100
4	1.18 mm	241	326	32.6	67.4	30-70	55-90	75-100	90-100
5	600 micron	201	527	52.7	47.3	15-34	35-59	60-79	80-100
6	300 micron	200	727	72.7	27.3	5-20	8-30	12-40	15-50
7	150 micron	192	919	91.9	8.1	0-10	0-10	0-10	0-15
8	Pan	81	1000	100.0	0.0	---	---	---	---

Result : The tested Sample Conforms to Grading Zone II





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4, 7TH MAIN MALLESWARAM, BANGALORE -3

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2019-09-07-19 Date: 24/07/2019

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in sahakaranagara, Byatarayanapura, Sanjeevininagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalasuru(P), Bangalore North-562157.

Customer's Reference : BBMP/EE/BTP/WO/70/2018-19

Date of Receipt : 19-07-19

Customer ID : Lintel Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/07/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Lintel Concrete	M20	17/07/2019	24/07/2019	150.82 X	22802	8.317	426.0	18.7	18.3
					151.18 X					
					151.14					
2	Lintel Concrete	M20	17/07/2019	24/07/2019	149.64 X	22367	8.262	404.5	18.1	
					149.47 X					
					151.98					
3	Lintel Concrete	M20	17/07/2019	24/07/2019	151.07 X	22760	8.300	412.3	18.1	
					150.66 X					
					151.32					

Asst. Ex. Eng. N.D.
At (127)

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Job ID : CP-2019-09-07-19 Date: 14/08/2019

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in sahakaranagara, Byatarayanapura, Sanjeevininagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalasuru(P), Bangalore North-562157.

Customer's Reference : BBMP/EE/BTP/WO/70/2018-19

Date of Receipt : 19-07-19

Customer ID : Lintel Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 14/08/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm ²)	Average Compressive Strength (N/mm ²)
1	Lintel Concrete	M20	17/07/2019	14/08/2019	150.35 X 149.18 X 149.15	22430	8.061	522.4	23.3	23.1
2	Lintel Concrete	M20	17/07/2019	14/08/2019	149.22 X 149.76 X 149.61	22347	8.663	501.7	22.5	
3	Lintel Concrete	M20	17/07/2019	14/08/2019	151.57 X 149.77 X 149.95	22700	8.561	533.6	23.5	

Asst. Ex. Eng. (21)

Assistant Executive Engineer,
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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL
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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2019-09-07-19 Date: 07/08/2019

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in saharanagara, Byatarayanapura, Sanjeevinagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalsuru(P), Bangalore North-562157.

Customer's Reference : BBMP/EE/BTP/WO/70/2018-19

Date of Receipt : 02-08-19

Customer ID : Roof Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 07/08/2019

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Roof Concrete	M20	31/07/2019	07/08/2019	149.16 X 149.38 X 149.33	22281	8.317	402.9	18.1	18.2
2	Roof Concrete	M20	31/07/2019	07/08/2019	151.72 X 149.37 X 151.54	22663	8.262	414.3	18.3	
3	Roof Concrete	M20	31/07/2019	07/08/2019	149.61 X 151.17 X 150.89	22617	8.300	412.0	18.2	

Asst. Exec. Eng.
AE (W)

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2019-09-07-19 Date: 28/08/2019

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in sahakaranagara, Byatarayanapura, Sanjeevininagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalasuru(P), Bangalore North-562157.

Customer's Reference : BBMP/EE/BTP/VO/70/2018-19

Date of Receipt : 02-08-19

Customer ID : Roof Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 28/08/2019

Date of test : 08/08/2019										
Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Roof Concrete	M20	31/07/2019	28/08/2019	149.56 X	22430	8.061	518.2	23.1	23.1
					149.98 X					
					150.18					
2	Roof Concrete	M20	31/07/2019	28/08/2019	150.77 X	22839	8.663	519.3	22.7	
					151.49 X					
					151.88					
3	Roof Concrete	M20	31/07/2019	28/08/2019	151.07 X	22942	8.561	536.8	23.4	
					151.87 X					
					149.87					

Asst. Ex. Eng.
A.E.E.

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bangalore.

Page 1/1
****End of Report****



FOR CIVIL Pro.
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Quality Manager



TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

Lab ID : CP-2019-09-07-19 Date: 06-07-19

Project Name : Package -1, Includes 2 works of Rs.248.00 Lakhs 1) Providing basic amenities and Procurement of dustbins in Kempapura, Amruthahalli, Jakkur, Jakkur Layout, Amruthanagara in Ward No.07, Byatarayanapura. 2) Providing basic amenities and procurement of dustbins in sahakaranagara, Byatarayanapura, Sanjeevinagar in Ward No.07, Byatarayanapura.

Agency : Sri.B.B.Umesh, No.385/1, Near Anjeneya Temple, Bettahalasuru(P), Bangalore North-562157.

Customer's Reference : BBMP/EE/BTP/WO/70/2018-19

Date of Receipt : 03-07-19

Sample Type/Size : Solid concrete blocks size (400X150X200)mm

Reference to BIS codes : IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification
Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex - C Clause 9.3 and 10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)

Date of test : 03-07-19

BLOCK DENSITY:

Sl. No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10 ⁶	Avg. Block Density in (Kg/cum)	As per IS 2185(Part 1):2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm ³)	Kg	Kg/m ³	Kg/m ³	
1	405	152	198	12189	32.062	2630.4	2651.0	Not less than 1800Kg/m ³
2	404	150	199	12059	31.046	2574.4		
3	402	152	199	12160	33.417	2748.2		

WATER ABSORPTION:

Sl. No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg. Water Absorption	As per IS 2185(Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	33.91	32.25	4.89	4.29	Shall not be more than 10% by mass
2	33.57	32.14	4.28		
3	33.44	32.21	3.69		





Lab ID

: CP-2019-09-07-19

Date: 06-07-19

DIMENSION ANALYSIS

Sl.no	Length mm	Breadth mm	Height mm	Requirement as per IS 2185(Part 1):2005
1	401	151	199	Length : ± 5mm Breadth : ± 3mm Height : ± 3mm
2	403	149	200	
3	399	150	203	
4	402	152	202	
5	399	151	199	
6	402	150	199	
7	402	151	200	
8	399	152	203	
9	401	149	202	
10	403	150	200	
11	399	151	203	
12	400	152	201	
13	401	152	201	
14	401	150	199	
15	401	153	201	
16	401	153	200	
17	404	149	200	
18	402	150	201	
19	399	150	202	
20	400	152	200	
Average of 20	401	151	201	

Page 2/3





Lab ID : CP-2019-09-07-19

Date: 06-07-19

COMPRESSIVE STRENGTH:

Sl. No.	Size of solid block		Area	Failure Load	Compressive strength	Average Compressive strength
	Length	Breadth				
	mm	mm	(mm ²)	(KN)	N/mm ²	(N/mm ²)
1	401	151	60513	288	4.8	4.5
2	403	149	59989	257	4.3	
3	399	150	59920	263	4.4	
4	402	152	61085	283	4.6	
5	399	151	60285	281	4.7	
6	402	150	60276	257	4.3	
7	402	151	60746	263	4.3	
8	399	152	60656	279	4.6	

As per IS Requirements (Table 2, Clause 5.1, 5.2 and 9.4)

Compressive strength		
Grade	Minimum average	Minimum Individual units.
C (5.0)	5.00 N/mm ²	4.00 N/mm ²
C (4.0)	4.00 N/mm ²	3.20 N/mm ²

As per IS
AS per IS

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bangalore.

Page 3/3
**** End of Report ****



FOR CIVIL Pro.
R. K. R.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager